

WE CLAIM AS OUR INVENTION:

1. A composite masonry block comprising:

5 (a) a block body, said block body having an irregular trapezoidal shape comprising a front surface and a back surface being substantially parallel to each other and separated by a distance comprising the depth of the block, an upper surface and a lower surface separated by a distance comprising the height of the block, said lower surface having a smaller area proportion than said upper surface, and first and second sidewall surfaces separated by a distance comprising the width of the block, said sidewall surfaces adjoining said block upper and lower surfaces, both said first and second sidewall surfaces each comprising a first and second part, said sidewall first part surfaces extending from said block front surface towards said block back surface at an angle of ninety degrees or less in relationship to said block front surface, said sidewall second part surfaces adjoining and lying between said sidewall first parts and said block back surface; and

10 15 20 25 30 (b) a flange extending from the block back surface past the height of the block, said flange comprising a setback surface and a locking surface, said setback surface extending from the lower edge of the flange in a plane parallel to the block upper and lower surfaces and towards said block front surface to adjoin said flange locking surface, said locking surface extending from the plane of said block lower surface adjoining and lying between said setback surface and said block lower surface.

2. The block of claim 1 wherein said block body comprises cores.

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3. The composite masonry block of claim 1 wherein said upper and said lower block surfaces are substantially planar.

5 4. The composite masonry block of claim 1 wherein said sidewall second part surfaces converge towards said block back surface.

5. The composite masonry block of claim 1 wherein said flange setback surface has a width ranging from about 0.5 inch to about 2 inches.

10 6. The composite masonry block of claim 1 wherein said front surface is coarse.

7. The composite masonry block of claim 1 wherein said composite elements comprise sand, stone, and cement.

15 8. The composite masonry block of claim 1 wherein the block comprises a retaining wall block.

20 9. The composite masonry block of claim 1, wherein said sidewall first part surfaces extend from said block front surface towards said block back surfaces at an angle of less than ninety degrees in relationship to said block front surface.

10. The composite masonry block of claim 8 wherein said block body comprises cores.

25 11. The composite masonry block of claim 8 wherein said upper and said lower block surfaces are substantially planar.

12. The composite masonry block of claim 8 wherein sidewall second part surfaces converge towards said block back surface.

30 13. The composite masonry block of claim 8 wherein said flange setback surface has a width ranging from about 0.5 inch to about 2 inches.

14. The composite masonry block of claim 8 wherein said front surface and said sidewall first part surfaces are coarse.

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15. The composite masonry block of claim 8 wherein said composite elements comprise sand, stone, and cement.

16. The composite masonry block of claim 8 wherein the block comprises a retaining wall block.

5 17. A retaining wall comprising a plurality of courses, each of said courses comprising a plurality of composite masonry blocks, each of said masonry blocks comprising:

10 (a) a block body, said block body having an irregular trapezoidal shape comprising a front surface and a back surface being substantially parallel to each other and separated by a distance comprising the depth of the block, an upper surface and a lower surface separated by a distance comprising the height of the block, said lower surface having a smaller area proportion than said upper surface, and first and second sidewall surfaces separated by a distance comprising the width of the block, said sidewall surfaces adjoining said block upper and lower surfaces, 15 both said first and second sidewall surfaces each comprising a first and second part, said sidewall first part surfaces extending from said block front surface towards said block back surface at an angle of no greater than ninety degrees in relationship to said block front surface, said sidewall second part surface adjoining and lying between said sidewall first parts and said block back surface; and

20 (b) a flange spanning the width of said block back surface and extending from the block back surface past the height of the block, said flange comprising a setback surface and a locking surface, said setback surface extending from the lower edge of the flange in a plane parallel to the block upper and lower surfaces and towards said block front surface to adjoin said 25 flange locking surface, said locking surface extending 30 35

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~~from the plane of said block lower surface adjoining  
and lying between said setback surface and said block  
lower surface.~~

5 18. The retaining wall of claim 16 wherein said wall  
comprises at least one anchoring matrix positioned between  
at least two adjacent blocks of two different courses.

19. The retaining wall of claim 17 wherein said wall  
has a serpentine pattern.

10 20. The retaining wall of claim 17 wherein said  
retaining wall masonry blocks comprise sidewall first part  
surfaces extending from said block front surface towards  
said block back surfaces at an angle of less than ninety  
degrees in relationship to said block front surface.

15 21. The retaining wall of claim 20 wherein said wall  
comprises at least one anchoring matrix positioned between  
at least two adjacent blocks of two different courses.

22. The wall of claim 20 wherein said wall has a  
serpentine pattern.

20 23. A masonry block mold, said mold comprising two  
opposing sides and a front and back wall, said opposing  
sides adjoining each other through mutual connection with  
said mold front and back walls, said mold having a central  
cavity bordered by said mold opposing sides and said mold  
front and back walls, said mold opposing sides comprising  
25 stepped means for holding additional block fill in the mold  
cavity adjacent said mold front and back walls.

30 24. The masonry block mold of claim 23 wherein said  
mold comprises support bars, said support bars suspended  
across the mold cavity, resting on said mold opposing sides  
and positioned adjacent said stepped means.

25. The masonry block mold of claim 24, wherein said  
mold comprises at least one core form suspended from each  
of said support bars, said forms suspended from said bars  
into the cavity of said mold.

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26. A method of using a masonry block mold, said mold comprising two opposing sides and a front and back wall, said opposing sides adjoining each other through mutual connection with said mold front and back walls, said mold 5 having a central cavity bordered by said mold opposing sides and said mold front and back walls, said mold opposing sides comprising stepped means for holding additional block fill in the mold cavity adjacent said mold front and back walls comprising the steps of:

- 10 (a) loading said mold with block fill;  
(b) drawing excess block from the mold; and  
(c) compressing the block fill within the mold.

27. The method of claim 26, additionally comprising the step of ejecting the formed masonry block from the 15 mold.

28. The method of claim 26, additionally comprising the step of affixing at least one support bar over the mold opposing sidewalls adjacent said sidewall step means.

29. The composite masonry block formed by the process 20 of claim 25.

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